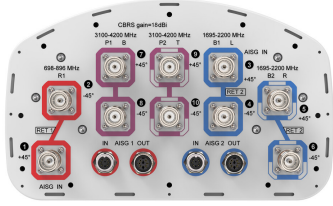


# NHHSS-65C-R2BT4



10-port sector antenna, 2x 698–896, 4x 1695–2200 and 4x 3100–4200 MHz, 65° HPBW, 2x RETs and 2x SBTs. Both high bands share the same electrical tilt.

- Perfect antenna to add 3.5GHz CBRS to macro sites
- Low band and mid band performance mirrors the performance of existing NHH hex port antennas
- Interleaved dipole technology providing for attractive, low wind load mechanical package
- Internal SBT on low and high band allow remote RET control from the radio over the RF jumper cable
- One LB RET and one HB RET. Both high bands are controlled by one RET to ensure same tilt level for 4x MIMO

## General Specifications

<b>Antenna Type</b>	Sector
<b>Band</b>	Multiband
<b>Color</b>	Light Gray (RAL 7035)
<b>Grounding Type</b>	RF connector inner conductor and body grounded to reflector and mounting bracket
<b>Performance Note</b>	Outdoor usage
<b>Radome Material</b>	Fiberglass, UV resistant
<b>Radiator Material</b>	Aluminum   Low loss circuit board
<b>Reflector Material</b>	Aluminum
<b>RF Connector Interface</b>	4.3-10 Female
<b>RF Connector Location</b>	Bottom
<b>RF Connector Quantity, high band</b>	4
<b>RF Connector Quantity, mid band</b>	4
<b>RF Connector Quantity, low band</b>	2
<b>RF Connector Quantity, total</b>	10

## Remote Electrical Tilt (RET) Information

<b>RET Hardware</b>	CommRET v2
<b>RET Interface</b>	4x 8 pin connector as per IEC 60130-9 Daisy chain in: Male / Daisy chain out: Female Pin3: RS485A(AISG_B), Pin5: RS485B(AISG_A), Pin6: DC 10~30V, Pin7: DC_Return

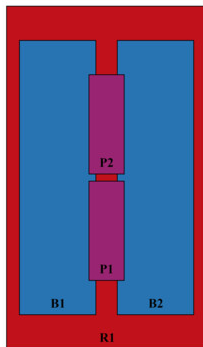
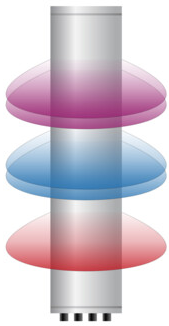
# NHHSS-65C-R2BT4

<b>RET Interface, quantity</b>	2 female   2 male
<b>Input Voltage</b>	10–30 Vdc
<b>Internal Bias Tee</b>	Port 1   Port 3
<b>Internal RET</b>	Low band (1)
<b>Power Consumption, active state, maximum</b>	10 W
<b>Power Consumption, idle state, maximum</b>	2 W
<b>Protocol</b>	3GPP/AISG 2.0 (Single RET)

## Dimensions

<b>Width</b>	301 mm   11.85 in
<b>Depth</b>	181 mm   7.126 in
<b>Length</b>	2438 mm   95.984 in
<b>Net Weight, without mounting kit</b>	28.1 kg   61.95 lb

## Array Layout

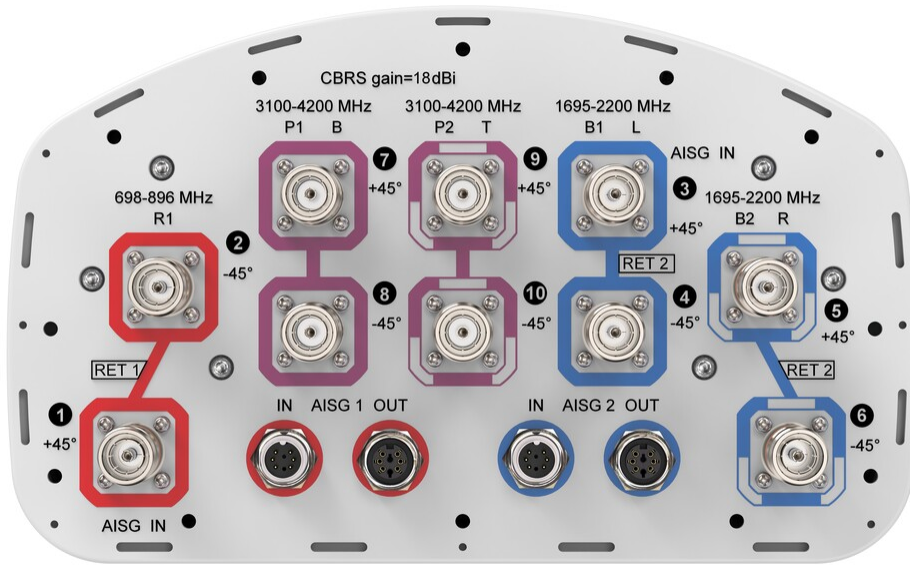


Array ID	Frequency (MHz)	RF Connector	RET (SRET)	AISG No.	AISG RET UID
R1	698-896	1 - 2	1	AISG1	CPxxxxxxxxxxxxxxxxR1
B1	1695-2200	3 - 4	2	AISG2	CPxxxxxxxxxxxxxxxxB1
B2	1695-2200	5 - 6			
P1	3100-4200	7 - 8	N/A	NA	N/A
P2	3100-4200	9 - 10			

(Sizes of colored boxes are not true depictions of array sizes)

## Port Configuration

# NHHSS-65C-R2BT4



## Electrical Specifications

<b>Impedance</b>	50 ohm
<b>Operating Frequency Band</b>	1695 – 2200 MHz   3100 – 4200 MHz   698 – 896 MHz
<b>Polarization</b>	±45°
<b>Total Input Power, maximum</b>	1,000 W @ 50 °C

## Electrical Specifications

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	3100–3550	3550–3700	3700–4200
<b>Gain, dBi</b>	15.8	16	17.5	17.8	18	17.7	17.4	17.4
<b>Beamwidth, Horizontal, degrees</b>	64	62	67	62	63	59	65	63
<b>Beamwidth, Vertical, degrees</b>	8.9	7.9	5.6	5.2	5	5.6	5.2	4.9
<b>Beam Tilt, degrees</b>	0–11	0–11	0–7	0–7	0–7	4	4	4
<b>USLS (First Lobe), dB</b>	19	19	19	21	23	18	18	17
<b>Front-to-Back Ratio at 180°, dB</b>	28	31	32	31	28	30	33	31
<b>Isolation, Cross Polarization, dB</b>	25	25	25	25	25	25	25	25
<b>Isolation, Inter-band, dB</b>	25	25	25	25	25	30	30	30
<b>VSWR   Return loss, dB</b>	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0
<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-153	-153	-153	-153	-153	-140	-140	-140

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<b>Input Power per Port at 50°C, maximum, watts</b>	300	300	300	300	300	100	100	100
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## Electrical Specifications, BASTA

<b>Frequency Band, MHz</b>	<b>698–806</b>	<b>806–896</b>	<b>1695–1880</b>	<b>1850–1990</b>	<b>1920–2200</b>	<b>3100–3550</b>	<b>3550–3700</b>	<b>3700–4200</b>
<b>Gain by all Beam Tilts, average, dBi</b>	15.5	15.8	17.1	17.6	17.7	17.3	17.1	17.1
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.5	±0.4	±0.6	±0.3	±0.3	±0.5	±0.5	±0.6
<b>Gain by Beam Tilt, average, dBi</b>	0° 15.9 5° 15.7 11° 15.3	0° 16.0 5° 16.0 11° 15.5	0° 17.0 3° 17.1 7° 17.0	0° 17.5 3° 17.6 7° 17.6	0° 17.6 3° 17.7 7° 17.7	0° 17.6 3° 17.7 7° 17.7	0° 17.6 3° 17.7 7° 17.7	0° 17.6 3° 17.7 7° 17.7
<b>Beamwidth, Horizontal Tolerance, degrees</b>	±1.8	±1.4	±5.9	±1.6	±3.9	±11	±5.6	±8.3
<b>Beamwidth, Vertical Tolerance, degrees</b>	±0.6	±0.7	±0.3	±0.2	±0.3	±0.4	±0.3	±0.3
<b>USLS, beampeak to 20° above beampeak, dB</b>	14	15	15	16	16	15	17	15
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	22	25	26	26	24	26	24	22
<b>CPR at Boresight, dB</b>	23	19	18	19	19	17	17	16
<b>CPR at Sector, dB</b>	11	9	10	9	8	8	7	6

## Mechanical Specifications

<b>Wind Loading @ Velocity, lateral</b>	330.0 N @ 150 km/h (74.2 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	757.0 N @ 150 km/h (170.2 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	398.0 N @ 150 km/h (89.5 lbf @ 150 km/h)
<b>Wind Speed, maximum</b>	241 km/h (150 mph)

## Packaging and Weights

<b>Width, packed</b>	380 mm   14.961 in
<b>Depth, packed</b>	295 mm   11.614 in
<b>Length, packed</b>	2571 mm   101.221 in
<b>Weight, gross</b>	40.5 kg   89.287 lb

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
CHINA-ROHS	Above maximum concentration value
ROHS	Compliant/Exempted

# NHHSS-65C-R2BT4

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UK-ROHS

Compliant/Exempted



## Included Products

- BSAMNT-3                      -        Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

## \* Footnotes

**Performance Note**        Severe environmental conditions may degrade optimum performance